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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,284	08/16/2000	Yiming Ye	YOR9-2000-0149US1 (8728-3)	2916
46069	7590	04/08/2005	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			AMINI, JAVID A	
			ART UNIT	PAPER NUMBER
			2672	

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/640,284	YE, YIMING	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6, 8, 15-20 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 7, 9-14, 19 and 21-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/2004 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant in claim 1 line 19 uses two different terms “non-visual communication” and “visual communication”. The specification does not specify the meaning of the “non-visual communication”, and it is not clear whether Applicant refers to human vision or a device vision. The device vision can be considered as a video camera or a receiver/transmitter with RF capabilities. On the same line Applicant adds a term “bi-directional” that is not found in the specification. By knowing that this type of communication must have a bi-directional sensing.

Drawings

New corrected drawings are required in this application because figures 1-18 contain hand drawing and typing. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Allowable Subject Matter

1. Claims 7, 9-14, 19 and 21-26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6, 15, 18, 27 and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Roland T. Chin (hereinafter refers as a Roland).

2. Claim 1.

Roland on first page under "Introduction" discloses a communication system to provide character recognition, medical diagnosis, target detection, and remote sensing. Recently,

machine vision for automating the manufacturing process has received considerable attention with the growing interest in robotics. “A communication system”. Roland on page 73 under subject of “2-D image representations” teaches 2-D image features and illustrates in fig. 3 a set of orientations that considered as “patterns”. “a generated signal template for generating a signal pattern to be transmitted”; The following step is obvious because Roland’s work involves robot vision that recognizes an object, “a display unit for displaying the signal pattern as a visual image pattern”. The following step is also obvious because Roland teaches the 2-D image must be aligned with robot vision in order to be recognized the object (see the abstract), “a display unit controller for controlling position and orientation of said display unit’. This step is obvious because Roland on page 84 under “Features” teaches the extraction of features is automatically performed by analysis of computer-aided design (CAD) models of the objects. Next, rotational and mirror symmetries are determined in order to identify all structurally equivalent features, “a signal receiving device for communicating with said signal transmitting device having a receiving memory and a receiving CPU”. Roland on page 94 under “Multiview feature representation” teaches storing the 2-D object, “a visual recording device for sensing the signal pattern displayed by the display unit”. This step is obvious because robot vision must be able to decode the visual image (2-D) in order to recognize the object, “an image decoder for decoding the visual image pattern”. Roland on page 81 first col. under section 3.2.4 teaches the matching is done first by generating a hypothesis of the object location and then by matching model segments to scene segments. The model location is sequentially adjusted by evaluating each match until the best match is found, “a visual recording device controller for automatically controlling the orientation and zoom of said visual recording device according to a location of

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said display unit, wherein said display unit controller controls the position and the orientation of said display unit according to a location of said visual recording device, wherein respective locations of said display unit and said visual recording device are communicated between said signal transmitting device and said signal receiving device via bi-directional non-visual communication, wherein visual communication between said signal transmitting device and said signal receiving device is established by the visual recording device detecting and decoding the visual images pattern displayed by the display unit". The steps are obvious because Roland on page 83 under section of 3.3.3 teaches a sophisticated modeling system for 2-D objects called the local feature focus method. Roland in fig. 4 illustrates bi-directional communication (see "LESS and GREATER"). Roland is silent about the display unit, however the object in fig. 6 on conveyor belt can be shown on a display also the view of that part considers as a pattern to the robot's vision. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of displaying the parts on a display unit while they are on conveyor belt. The advantageous are monitoring the electromechanical objects simultaneously.

3. Claim 3.

See rejection of claim 1.

4. Claim 6.

Roland on page 74 second col. discloses that the structured local features of the model are used to predict where objects are located in the scene, therefore, the step of " automatically adjusting pan and tilt of the visual recording device to have a view of the visual image pattern displayed by the display unit; and automatically adjusting an angle size of the visual recording device" is

obvious. Also Roland teaches on page 76 under section 3.1.2 Example 2: Using Global Features to identify Grasp Points.

5. Claim 15.

See rejection of claim 1.

6. Claim 18.

See rejection of claim 6.

7. Claims 27 and 29.

See rejection of claim 1.

Claims 2, 4, 5, 8, 16, 17, 20, 28 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Roland, and further in view of Rhoads.

8. Claim 2.

The system of claim 1, wherein a plurality of mirrors are used to transmit signal patterns between a signal transmitting device and a signal receiving device having obstructions between them. The step is obvious because those of ordinary skill in the art may preferably employ mirrors to enable communication between an object and the robot vision in Roland 's work.

9. Claim 4.

Roland on page 79 in fig. 7a illustrates the image of the signal pattern into a plurality of blocks, but Roland does not explicitly specify a plurality of circles within blocks, however, Rhoads in Figs. 21A and B illustrates the step of dividing the image of the signal pattern into a plurality of blocks. Rhoads in Fig. 6 illustrates the step of determining the centers of said blocks using a position and radius look-up table and also see in Fig 22 illustrates using four points (954) to guide all further image processing operations. Rhoads in Figs. 19 and 20 illustrates a plurality of

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circles within said blocks having corresponding centers and radiuses determined by the position and radius look-up table. Rhoads in paragraph 0570 teaches The exemplary application uses six basic parameters: 1) luminance; 2) difference from local average; 3) the asymmetry factor (with or against the grain); 4) minimum linear factor; 5) bit plane bias factor; and 6) global gain (the user's single top level gain knob). Rhoads in paragraph 072 teaches that first scan this into a digitized form via a normal high quality black and white scanner with a typical photometric spectral response curve, as for “determining a plurality of black and white intensities from said average intensities of respective blocks of each of said circles using predetermined values”.

Rhoads in Fig. 40 illustrates the step of decoding a pattern created by said black and white intensities. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Rhoads's method, that includes inputting the document into a second medium; decoding symbols into binary security data representing the security information; and outputting the binary security data in a format retrievable to be interpretable as the security information by a display device into Roland's invention in order to provide better security and safety of data.

10. Claims 5, 16.

See rejection of claim 4.

11. Claim 8.

Rhoads in paragraph 0332 teaches the blobs are groups of adjoining pixels each having an identical pixel value.

12. Claim 17.

See rejection of claim 5.

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13. Claim 20.

Rhoads in paragraph 0332 teaches the blobs are groups of adjoining pixels each having an identical pixel value.

14. Claims 28 and 30.

See rejection of claim 8.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini


JEFFERY BRIER
PRIMARY EXAMINER